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JUL 27 1909

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## IMMUNISM IN TYPHOLD.

By E. Tracy Bishop, M.D.

In seeking to put into a condition of immunity any system in which the typhoid bacteria have secured lodgment, it is necessary to supply a material which is hostile to the existence of the bacteria as it occurs in its familiar habitat, the intestinal canal, but to supply it in overwhelming quantity and kind such that it may freely and abundantly permeate the tissues of every part of the system.

It is equally necessary at the same time to prohibit the introduction into that system of any substance upon which the bacteria can thrive. Anything, whatever it may be, that microscopists have found advantageous as a culture medium should be excluded, as also all related food substances. This method of treatment of Typhoid Fever is not theoretical, but is entirely in accord with the universal, natural law.

When we want things to grow we put them into conditions favoring growth; when we want to prevent growth it is reasonable and in harmony with nature to establish surrounding soil (if you please) in which their existence is impossible. The only objection that I can think of to such a procedure is that heretofore it has been unheard of.

The human intellect has been so bred to the idea of promoting reproduction and growth that it cannot entertain or appreciate a contrary thought. The present method of treating Typhoid is not at all in harmony with what we know of its nature and surroundings. It is high time the pro re natâ or the expectant methods be abandoned for positive scientific methods. We ought at least to have as much method as there is in material conditions. Treatment in accord with this principle has been employed by the writer for many years and with phenomenally favorable results, the diagnosis in various cases being confirmed by blood tests.

After having diagnosed the case, give a hot soap and water sponge bath, then put the patient in clean clothes, and if he is foo sick to be about, put him in a clean bed (a straw or cotton mattress is best, with one or two clean sheets over it and a like covering). Cotton is the best material, because it is more comfortable and more easily and thoroughly cleaned, and less liable to retain moist secretions. The cleaning and changing of the clothing should be done morning and evening; if it cannot be washed, it will do quite as well to iron it thoroughly with a very hot iron. The room should be cleared of everything not necessary to the patient. It is

best to have plenty of windows and to have them as wide open as

possible.

The medicinal treatment is begun with a capsule containing six drops of creosote dissolved in a dram or more of codliver oil (creosote so compounded is not an irritant) every six hours during the day. This remedy rapidly permeates the entire system, but should not be discontinued entirely until a few days after convalescence is established, which usually occurs in from five to ten days from the beginning of the treatment. To secure the necessary sewerage of the system, give a powder at bedtime composed of one grain of calomel and six grains of salicylate of soda, to be followed in the morning by a tablespoonful of equal parts of codliver oil and castor oil. A comfortable way of giving this is by first wetting the mouth with whiskey and then quickly swallowing the oils. This treatment should be employed without regard to diarrheal conditions that may be present, as it is both nutrient and disinfectant.

Nutrition as a remedy is equally, if not more important than medicinal remedies in uncomplicated conditions. It should consist of such substances as will be destructive to the bacilli and nourishing to the patient. Such things are butter and cream; no milk. Butter can be used freely on thoroughly browned toast; it can also be made into a very palatable soup, the toast to be broken into hot water and the butter added. Pure cream similarly used makes a very acceptable soup. Ice cream made of pure cream is another refreshing and nourishing dish; cream on the pulp of roast apple is another; tomato soup made of pure, fresh cream and strained tomato is very grateful; good coffee, with an abundance of cream; ripe peaches and cream (don't eat the peach), cream punch; lemonade, with a little sugar and a little whiskey, cold or hot, is a better drink than water, and makes a good meal with well-buttered toast; a salad of olive oil and lemon juice on lettuce is good, chewing, but usually ejecting, the lettuce. This keeps the mouth wholesome and the secretory apparatus of the mouth in working condition, though not always relished.

Patients should not be fed too often, but if possible at their accustomed meal times, care being taken to wash the mouth with the following preparation: Two grains of corrosive sublimate in an ounce of alcohol; one-half teaspoonful of this diluted with two or three tablespoonfuls of water. The food will taste better and patients will not swallow any filth. Of course, you will not have the characteristic tongue and sordes which go with the "regular treatment" and which are used to verify the diagnosis, but the

patient won't care.

It remains to say that the treatment of the patient's skin is very important. No matter what the temperature may be, he should be given an alcohol sponge bath when putting on his clean clothes at bedtime and whenever the temperature is high. When *very* high use freely, and if obstinate add 10 or 15 per cent. of ether to the alcohol to promote rapid evaporation, using over the patient a light cover at the time; if necessary, use the spray.

This treatment will be more effectual, less barbarous, and not so dangerous as the cold-water bath as at present employed. I know

of a patient who was killed by the cold-water bath, a case of meningitis having been mistaken for typhoid fever.

Alcohol disinfects the clothing and the skin. When it irritates

the skin, follow it with a tepid or cold water sponge.

It is not necessary to keep the patients in bed; they can be put on a porch or under a tree if the weather is favorable. Patients so treated, and without complications or some intestinal injuries or periostitis, will be entirely convalescent in from four to ten days and with absolutely no chance of a relapse.

For greater protection for attendants, the discharges ought to be treated at once. Sulphate of iron in solution is effectual and cheap.

In conclusion, I would ask that anyone employing this treatment will do me the favor of using it in its entirety, as I wish to prove to the profession beyond a doubt the truth of my contention.

Appended are the records of the temperature of two sisters, aged 19 and 21, and both, curiously enough, attacked by the dis-

ease at the same time.

The records were kept by their mother during the first four days of their illness and subsequently by the patients themselves. The diagnoses were confirmed by the Widal test.

After six or seven days and reduced temperature, the oil and

creosote capsules were limited to two a day:

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